

LISTING OF CLAIMS:

1. (Currently Amended) An optical interconnection circuit board configured to guide an optical signal, comprising:

a substrate having a surface;

a first clad layer having a flat surface formed on the surface of the substrate;

a core layer configured to guide the optical signal in a predetermined direction, the core layer being formed on the flat surface of the first clad layer and extended in the predetermined direction;

a second clad layer formed on the core layer;

a first mirror segment having a first mirror face configured to reflect the optical signal guided in the core layer through the second clad layer to the outside thereof, the first mirror segment being formed on the flat surface of the first clad layer and the mirror face being contacted to the core layer; and

an electric circuit configured to generate an electrical signal, the electric circuit having a wiring pattern formed on the flat surface of the first clad layer, wherein and the first mirror segment and the wiring pattern being are made of electric conductive metal and the first mirror segment is electrically connected to the electric circuit.

2. (Original) The optical interconnection circuit board according to claim 1 further comprising:

a second mirror segment having a second mirror face configured to reflect the optical signal into the core layer, the optical signal being incident on the second mirror face from the outside of the circuit board through the second clad layer, the second mirror segment being

formed on the flat surface of the first clad layer and the mirror face being contacted to the core layer.

Claims 3-26 (Canceled).

27. (Previously Presented) A method of manufacturing an optical interconnection circuit board for guiding an optical signal, comprising

preparing a substrate having a surface,

forming a first clad layer having a flat surface, on the surface of the substrate;

forming a first mask layer on the first clad layer, the first mask layer having a first opening region;

forming a second mask layer on the first mask layer, the second mask layer having a second opening smaller than the first opening, the second opening being substantially aligned with the first opening and;

depositing a mirror layer on the first clad layer through the first and second openings to form a mirror on the first clad layer, the mirror having a reflection face thereon and having a first height;

removing the first and second mask layer;

forming a core segment on the first clad layer to embed the mirror in the core segment, the core segment having a second height not greater than the first height and being so extended as to have a predetermined optical circuit pattern; and

covering the core segment with a second clad layer.

28. (Previously Presented) The method according to claim 27, further comprising:

forming a shield layer on the second clad layer;

forming a cover layer on the shield layer, the cover layer having a coupling hole configured to allow the optical signal to pass therethrough; and

etching the shield layer under the coupling hole of the cover layer to form a coupling portion configured to align the optical interconnection circuit board with an optical unit.

Claim 29 (Canceled).

30. (Previously Presented) A method of manufacturing an optical interconnection circuit board according to Claim 27, wherein the first and second mask layers include first and second resist layers, respectively.

31. (Previously Presented) A method of manufacturing an optical interconnection circuit board according to Claim 27, wherein the first and second mask layers include a resist layer and a metal layer, respectively.